

## SEQUENCE LISTING

*Sub A*

<110> Anderson, Christen M.  
Clevenger, William

<120> COMPOSITIONS AND METHODS FOR REGULATING  
ENDOGENOUS INHIBITOR OF ATP SYNTHASE, INCLUDING  
TREATMENT FOR DIABETES

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<140> US  
<141> 2002-02-27

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10003845-022202

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1000  
900  
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700  
600  
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400  
300  
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100

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gagaagacta gagaggcagct ggctgccttg aagaagcacc atgaagatga gattgaccac	240
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20 25 30	
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35 40 45	
Lys Arg Glu Lys Ala Glu Glu Asp Arg Tyr Phe Arg Glu Lys Thr Arg	
50 55 60	
Glu Gln Leu Ala Ala Leu Lys Lys His His Glu Asp Glu Ile Asp His	
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Met	Asp	Thr	Gly	Ala	Gly	Ser	Ile	Arg	Glu	Ala	Gly	Gly	Ala	Phe	Gly
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Lys	Arg	Glu	Lys	Ala	Glu	Glu	Asp	Arg	Tyr	Phe	Arg	Glu	Lys	Thr	Lys
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Glu	Gln	Leu	Ala	Ala	Leu	Arg	Lys	His	His	Glu	Asp	Glu	Ile	Asp	His
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<223> PCR primer

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aagtgggctt ttgctcatgt gtcat

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<210> 19

<211> 47

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<400> 21

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<210> 22

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<223> Tat-derived cellular targeting sequence

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Arg Tyr Gly Arg Lys Lys Arg Arg Gln Arg Gly  
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<211> 48

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<210> 24

<211> 34

<212> DNA

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<400> 24

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mature form of rat IF1  
  
<400> 25  
Phe Gly Lys Arg Glu Lys Ala Glu Glu Asp Arg Tyr Phe Arg Glu Lys  
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Thr Arg Glu Gln Leu Ala Ala Leu Lys  
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<210> 26  
<211> 17  
<212> PRT  
<213> Artificial Sequence  
  
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<223> Polypeptide consisting of amino acids 42-58 of the  
mature form of rat IF1  
  
<400> 26  
Leu Ala Ala Leu Lys Lys His His Glu Asp Glu Ile Asp His His Ser  
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Lys  
  
<210> 27  
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Arg Lys Lys Arg Arg Gln Arg  
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<212> PRT  
<213> Rattus norvegicus  
  
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40033845-022722

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<223> Synthetic peptide fragment derived from rat IF1 sequence.

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Ser Ile Arg Glu Ala Gly Gly Ala Phe Gly Lys Arg Glu Lys Ala Glu  
1 5 10 15  
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20 25 30  
Lys Lys

<210> 30  
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<400> 30  
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Glu Asp Arg Tyr  
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<210> 31  
<211> 20  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic peptide fragment derived from rat IF1 sequence.

<400> 31  
Ile Arg Glu Ala Gly Gly Ala Phe Gly Lys Arg Glu Lys Ala Glu Glu  
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Asp Arg Tyr Phe  
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<210> 32  
<211> 20  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic peptide fragment derived from rat IF1  
sequence.

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Arg Tyr Phe Arg  
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<210> 33  
<211> 20  
<212> PRT  
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<220>  
<223> Synthetic peptide fragment derived from rat IF1  
sequence.

<400> 33  
Glu Ala Gly Gly Ala Phe Gly Lys Arg Glu Lys Ala Glu Glu Asp Arg  
1 5 10 15  
Tyr Phe Arg Glu  
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<210> 34  
<211> 20  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic peptide fragment derived from rat IF1  
sequence.

<400> 34  
Ala Gly Gly Ala Phe Gly Lys Arg Glu Lys Ala Glu Glu Asp Arg Tyr  
1 5 10 15  
Phe Arg Glu Lys  
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<210> 35  
<211> 20  
<212> PRT  
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<223> Synthetic peptide fragment derived from rat IF1  
sequence.

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Gly Gly Ala Phe Gly Lys Arg Glu Lys Ala Glu Glu Asp Arg Tyr Phe

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Arg Glu Lys Thr                                
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sequence.

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<210> 37  
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<223> Synthetic peptide fragment derived from rat IF1  
sequence.

<400> 37  
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sequence.

<400> 38  
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<210> 39

4003815-022202

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Arg Glu Gln Leu  
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<223> Synthetic peptide fragment derived from rat IF1 sequence.

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Lys Arg Glu Lys Ala Glu Glu Asp Arg Tyr Phe Arg Glu Lys Thr Arg  
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Glu Gln Leu Ala  
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<210> 41  
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Arg Glu Lys Ala Glu Glu Asp Arg Tyr Phe Arg Glu Lys Thr Arg Glu  
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Gln Leu Ala Ala  
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Glu Lys Ala Glu Glu Asp Arg Tyr Phe Arg Glu Lys Thr Arg Glu Gln  
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<212> PRT  
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Ala Ala Leu Lys  
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sequence.

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Ala Leu Lys Lys  
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<212> PRT  
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sequence.

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<210> 47  
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Ser Ile Arg Glu Ala Gly Gly Ala Phe Gly Lys Arg Glu  
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<210> 49  
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<212> PRT  
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<220>  
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sequence.

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1 5 10 15  
Glu

<210> 52  
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<212> PRT  
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1 5 10 15  
Glu Asp

<210> 53  
<211> 19  
<212> PRT  
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&lt;220&gt;

<223> Synthetic peptide fragment derived from rat IF1  
sequence.

&lt;400&gt; 53

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&lt;210&gt; 54

&lt;211&gt; 20

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Synthetic peptide fragment derived from rat IF1  
sequence.

&lt;400&gt; 54

Ser Ile Arg Glu Ala Gly Gly Ala Phe Gly Lys Arg Glu Lys Ala Glu  
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Glu Asp Arg Tyr  
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&lt;210&gt; 55

&lt;211&gt; 21

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Synthetic peptide fragment derived from rat IF1  
sequence.

&lt;400&gt; 55

Ser Ile Arg Glu Ala Gly Gly Ala Phe Gly Lys Arg Glu Lys Ala Glu  
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Glu Asp Arg Tyr Phe  
20

&lt;210&gt; 56

&lt;211&gt; 22

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Synthetic peptide fragment derived from rat IF1  
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<213> Artificial Sequence  
  
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<223> Synthetic peptide fragment derived from rat IF1  
sequence.

<400> 57  
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 Glu Asp Arg Tyr Phe Arg Glu  
                   20

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<223> Synthetic peptide fragment derived from rat IF1  
sequence.

<400> 58  
Ser Ile Arg Glu Ala Gly Gly Ala Phe Gly Lys Arg Glu Lys Ala Glu  
1 5 10 15  
Glu Asp Arg Tyr Phe Arg Glu Lys  
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<220>  
<223> Synthetic peptide fragment derived from rat IF1  
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<210> 60

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<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic peptide fragment derived from rat IF1 sequence.

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20 25

<210> 61  
<211> 27  
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<213> Artificial Sequence

<220>  
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20 25

<210> 62  
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<212> PRT  
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<400> 62  
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Glu Asp Arg Tyr Phe Arg Glu Lys Thr Arg Glu Gln  
20 25

<210> 63  
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<220>  
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sequence.

<400> 63

Ser Ile Arg Glu Ala Gly Gly Ala Phe Gly Lys Arg Glu Lys Ala Glu  
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<210> 64

<211> 30

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<220>

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sequence.

<400> 64

Ser Ile Arg Glu Ala Gly Gly Ala Phe Gly Lys Arg Glu Lys Ala Glu  
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<210> 65

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide fragment derived from rat IF1  
sequence.

<400> 65

Ser Ile Arg Glu Ala Gly Gly Ala Phe Gly Lys Arg Glu Lys Ala Glu  
1 5 10 15  
Glu Asp Arg Tyr Phe Arg Glu Lys Thr Arg Glu Gln Leu Ala Ala  
20 25 30

<210> 66

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide fragment derived from rat IF1  
sequence.

<400> 66

Ser Ile Arg Glu Ala Gly Gly Ala Phe Gly Lys Arg Glu Lys Ala Glu  
1 5 10 15  
Glu Asp Arg Tyr Phe Arg Glu Lys Thr Arg Glu Gln Leu Ala Ala Leu

20

25

30

<210> 67  
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<223> Synthetic peptide fragment derived from rat IF1  
sequence.

<400> 67  
Ser Ile Arg Glu Ala Gly Gly Ala Phe Gly Lys Arg Glu Lys Ala Glu  
1 5 10 15  
Glu Asp Arg Tyr Phe Arg Glu Lys Thr Arg Glu Gln Leu Ala Ala Leu  
20 25 30  
Lys

<210> 68  
<211> 35  
<212> PRT  
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<220>  
<223> Epitope tag sequence.

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Gly Gly Gln Gln Met Gly Arg Asp Leu Tyr Asp Asp Asp Asp Lys Asp  
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Pro Ser Ser  
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<210> 69  
<211> 25  
<212> PRT  
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<220>  
<223> Organellar targeting sequence

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Met Arg Val Leu Gln Thr Arg Gly Phe  
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<210> 70

<211> 13  
<212> PRT  
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<220>  
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<400> 70  
Gly Tyr Gly Arg Lys Lys Arg Arg Gln Arg Arg Arg Gly  
1 5 10

<210> 71  
<211> 107  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Fusion protein

<400> 71  
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Gly Gly Gln Gln Met Gly Arg Asp Leu Tyr Asp Asp Asp Asp Lys Asp  
20 25 30  
Pro Ser Ser Gly Tyr Gly Arg Lys Lys Arg Arg Gln Arg Arg Arg Gly  
35 40 45  
Met Ala Gly Ser Ala Leu Ala Val Arg Ala Arg Leu Gly Val Trp Gly  
50 55 60  
Met Arg Val Leu Gln Thr Arg Gly Phe Ser Ile Arg Glu Ala Gly Gly  
65 70 75 80  
Ala Phe Gly Lys Arg Glu Lys Ala Glu Glu Asp Arg Tyr Phe Arg Glu  
85 90 95  
Lys Thr Arg Glu Gln Leu Ala Ala Leu Lys Lys  
100 105

<210> 72  
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<212> DNA  
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<220>  
<223> Nucleotide that codes for fusion protein.

<400> 72  
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ggtgtctggg gtatgagggt cctgcaaacc cgaggcttct ccatccgaga agctgggtggg 240  
gccttcggga aacgagagaa ggctgaagag gatcggtact tccgagagaa gactagagag 300  
cagctggctg cttgaagaaa g 321